

What is claimed is:

1. A capacity planning method comprising the steps of:
identify each of a plurality of tasks;
identifying subtasks associated with each of the plurality of tasks;
accessing production rate information related to a relationship between the
amount of time or the number of staff needed to perform each of the identified subtasks;
calculating a work volume based on the identified subtasks and the production
rate information;
accessing staff information;
determining staff availability based on the staff information; and
generating a capacity report based on the work volume and the staff availability.
2. The capacity planning method of claim 1, wherein the production rate
information includes the amount of time needed to perform respective identified
subtasks.
3. The capacity planning method of claim 1, wherein the production rate
information includes the number of each identified subtasks that can be performed per
one time unit.
4. The capacity planning method of claim 3, wherein the time unit is an hour.

5. The capacity planning method of claim 1, wherein the production rate information is obtained from a database or by observation.

6. The capacity planning method of claim 1, wherein the work volume is calculated as the number of time units needed to perform the identified subtasks.

7. The capacity planning method of claim 1, wherein the work volume is calculated as the number of fulltime employees needed to perform the identified subtasks, based on standard work hours per day.

8. The capacity planning method of claim 7, wherein the standard work hours per day are configurable.

9. The capacity planning method of claim 1, wherein the staff information includes at least one of information related to the number of employees, capability of a specific employee to perform the subtasks, information related to exempt status of employees, information related to staff outage, information related to work time that cannot be used to perform the subtasks, and information related to business days within a specific period of time.

10. The capacity planning method of claim 9, wherein the information related to the number of employees includes at least one of the number of full-time employees,

the number of other types of employees, the total hours worked by other types of employees expressed as a full-time employee equivalent; and

the other types of employees include at least one of part-time employees, temporary employees, interns, and borrowed staff.

11. The capacity planning method of claim 9 further comprising the step of calculating extended staff availability by considering extended work hours; and

wherein the capacity report is generated further based on the extended staff availability.

12. The capacity planning method of claim 11, wherein the extended staff availability is calculated based on a plurality of overtime scenarios or a plurality of expanded staff scenarios.

13. The capacity planning method of claim 11, wherein the capacity report is generated based on a first comparison between the work volume and the staff availability, and a second comparison between the work volume and the extended staff availability.

14. The capacity planning method of claim 13 further including the step of generating warnings based on the first comparison and the second comparison.

15. The capacity planning method of claim 9, wherein
the work volume is calculated as the amount of time needed to perform the
subtasks; and
the staff availability is calculated as the total amount of time that employees can
perform the subtasks within a specific period of time.

16. The capacity planning method of claim 15, wherein the total amount of time
that employees can perform the subtasks within the specific period of time is calculated
by using the equation of :

$$\begin{aligned} & (\text{the number of employees}) * (\text{the number of standard work hours per day}) \\ & * (\text{the number of business days within the specific period of time}) - (\text{the amount of} \\ & \text{time lost due to staff outage within the specific period of time}) - (\text{the amount of} \\ & \text{work time that cannot be used to perform the subtasks within the specific period} \\ & \text{of time}) \end{aligned}$$

17. The capacity planning method of claim 16, further comprising the step of
calculating extended staff availability by considering extended work hours; and
wherein the capacity report is generated further based on the extended staff
availability.

18. The capacity planning method of claim 17, wherein the extended staff
availability is calculated based on a plurality of over time scenarios or on a plurality of
expanded staff scenarios.

19. The capacity planning method of claim 18, wherein the capacity report includes a cost analysis.

20. The capacity planning method of claim 9, wherein the staff availability is calculated based on at least one of the number of employees, the information related to staff outage, the information related to the amount of work time that cannot be used to perform the subtasks, the information related to business days, and the amount of defined work hours per day.

21. The capacity planning method of claim 20, wherein the information related to the amount of work time that cannot be used to perform the subtasks depends on at least one of the position, the identity, the exempt status, the handling capability, and the outage status of the respective employee.

22. A data processing system for capacity planning comprising:

- a processor for processing data;
- a memory;
- a data storage device for storing data;
- bus means operatively coupled to the memory, the data storage device, and the processor;
- the data storage device bearing instructions to cause the data processing system upon execution of the instructions by the processor to perform the steps of:
- accessing information related to a plurality of tasks;

identify each of the plurality of tasks;
identifying subtasks associated with each of the plurality of tasks;
accessing production rate information related to the amount of time or the
number of staff needed to perform each of the identified subtasks;
calculating a work volume based on the identified subtasks and the production
rate information;
accessing staff information;
determining staff availability based on the staff information; and
generating a capacity report based on the work volume and the staff availability.

23. The data processing system of claim 22, wherein the production rate information includes the amount of time needed to perform respective identified subtasks.

24. The data processing system of claim 22, wherein the production rate information includes the number of each identified subtasks that can be performed per one time unit.

25. The data processing system of claim 24, wherein the time unit is an hour.

26. The data processing system of claim 22, wherein the production rate information is obtained by observation or from a database in the data storage device.

27. The data processing system of claim 22, wherein work volume is calculated as the number of time units needed to perform the identified subtasks.

28. The data processing system of claim 22, wherein the work volume is calculated as the number of fulltime employees needed to perform the identified subtasks, based on standard work hours per day.

29. The data processing system of claim 28, wherein the standard work hours per day are configurable.

30. The data processing system of claim 22, wherein the staff information includes at least one of information related to the number of employees, information related to identities and positions of employees, information related to exempt status of employees, information related to staff outage, information related to the capability of a specific employee to perform the subtasks, information related to work time that cannot be used to perform the subtasks, and information related to business days in a specific period of time.

31. The data processing system of claim 22, wherein the staff information and the information related to the plurality of tasks are obtained from at least one of the data storage device and a remote data processing system connected to the data processing system via a network.

32. The data processing system of claim 30, wherein the information related to the number of employees includes at least one of the number of full-time employees, the number of other types of employees, and the total hours worked by other types of employees expressed as a full-time employee equivalent; and

the other types of employees include at least one of part-time employees, temporary employees, interns and borrowed staff.

33. The data processing system of claim 30, wherein the data storage device further stores instructions that, when executed by the data processor, control the data processing system to perform the step of calculating extended staff availability by considering extended work hours; and

wherein the capacity report is generated further based on the extended staff availability.

34. The data processing system of claim 33, wherein the extended staff availability is calculated based on a plurality of overtime scenarios or a plurality of expanded staff scenarios.

35. The data processing system of claim 33, wherein the capacity report is generated based on a first comparison between the work volume and the staff availability, and a second comparison between the work volume and the extended staff availability.

36. The data processing system of claim 35, wherein the data storage device further stores instructions that, when executed by the data processor, control the data processing system to perform the step generating warnings based on the first comparison and the second comparison.

37. The data processing system of claim 30, wherein
the work volume is calculated as the amount of time needed to perform the subtasks; and
the staff availability is calculated as the total amount of time that employees can perform the subtasks within a specific period of time.

38. The data processing system of claim 37, wherein the total amount of time that employees can perform the subtasks within the specific period of time is calculated by using the equation of :

$$\begin{aligned} & (\text{the number of employees}) \cdot (\text{the number of standard work hours per day}) \\ & \cdot (\text{the number of business days within the specific period of time}) - (\text{the amount of} \\ & \text{time lost due to staff outage within the specific period of time}) - (\text{the amount of} \\ & \text{work time that cannot be used to perform the subtasks within the specific period} \\ & \text{of time}) \end{aligned}$$

39. The data processing system of claim 30, wherein the staff availability is calculated based on at least one of the number of employees, the information related to staff outage, the information related to work time that cannot be used to perform the subtasks, the information related to business days, and the information related to defined work hours per day.

40. The data processing system of claim 39, wherein the information related to work time that cannot be used to perform the subtasks depends on at least one of the position, the identity, the exempt status, the handling capability, and the outage status of the respective employee.

41. A program comprising instructions, which may be embodied in a machine-readable medium, for controlling a data processing system to perform capacity planning, the instructions upon execution by the data processing system causing the data processing system to perform the steps comprising:

- accessing information related to a plurality of tasks;
- identify each of the plurality of tasks;
- identifying subtasks associated with each of the plurality of tasks;
- accessing production rate information related to the amount of time or the number of staff needed to perform each of the identified subtasks;
- calculating a work volume based on the identified subtasks and the production rate information;
- accessing staff information;
- determining staff availability based on the staff information; and
- generating a capacity report based on the work volume and the staff availability.

42. The program of claim 41, wherein the production rate information includes the amount of time needed to perform respective identified subtasks.

43. The program of claim 42, wherein the production rate information includes the number of each identified subtasks that can be performed per one time unit.

44. The program of claim 43, wherein the time unit is an hour.

45. The program of claim 41, wherein work volume is calculated as the number of time units needed to perform the identified subtasks.

46. The program of claim 41, wherein the work volume is calculated as the number of fulltime employees needed to perform the identified subtasks, based on standard work hours per day.

47. The program of claim 41, wherein the staff information includes at least one of information related to the number of employees, information related to identities and positions of employees, information related to exempt status of employees, information related to the capability of a specific employee to handle the subtasks, information related to staff outage, information related to work time that cannot be used to perform the subtasks, and information related to business days in a specific period of time.

48. The program of claim 47, wherein the information related to the number of employees includes at least one of the number of full-time employees, the number of other types of employees, and the total hours worked by other types of employees expressed as a full-time employee equivalent; and

the other types of employees include at least one of part-time employees, temporary employees, interns, and borrowed staff.

49. The program of claim 47 further including instructions that, when executed by the data processor, control the data processing system to perform the step of calculating extended staff availability by considering extended work hours; and wherein the capacity report is generated further based on the extended staff availability.

50. The program of claim 49, wherein the extended staff availability is calculated based on a plurality of over time scenarios or a plurality of expanded staff capacity.

51. The program of claim 49, wherein the capacity report is generated based on a first comparison between the work volume and the staff availability, and a second comparison between the work volume and the extended staff availability.

52. The program of claim 51 further including instructions that, that, when executed by the data processor, control the data processing system to perform the step generating warnings based on the first comparison and the second comparison.

53. The program of claim 47, wherein the work volume is calculated as the amount of time needed to perform the subtasks; and

the staff availability is calculated as the total amount of time that employees can perform the subtasks within a specific period of time.

54. The program of claim 53, wherein the total amount of time that employees can perform the subtasks within the specific period of time is calculated by using the equation of :

$$\begin{aligned} & (\text{the number of employees}) \cdot (\text{the number of standard work hours per day}) \\ & + (\text{the number of business days within the specific period of time}) - (\text{the amount of} \\ & \text{time lost due to staff outage within the specific period of time}) - (\text{the amount of} \\ & \text{work time that cannot be used to perform the subtasks within the specific period} \\ & \text{of time}) \end{aligned}$$

55. The program of claim 47, wherein the staff availability is calculated based on at least one of the number of employees, the information related to staff outage, the information related to work time that cannot be used to perform the subtasks, the information related to business days, and the information related to defined work hours per day.

56. The program of claim 55, wherein the information related to work time that cannot be used to perform the subtasks depends on at least one of the position, the identity, the exempt status, the handling capability, and the outage status of the respective employee.